LAWN-KING

PETROL BRUSHCUTTER LK FW53E

Model FW53E

Translation of the original instructions for use

WARNING: Read the instructions before using the product
Before initial start-up, please read through these operating instructions carefully prior to using the machine. Keep the instructions safe and pass them on to any subsequent user so that the information is always available.

Serial Number:

CONTENTS

Contents	2
Intended use	3
Safety information	3
Symbols	8
General description	10
Assembly	13
Operation	18
Maintenance and service	25
Troubleshooting	30
Storage	31
Disposal / environmental protection	32
Guarantee	32
Technical specifications	33
CE	34

INTENDED USE

When the thread reel is used, the motorized trimmer is suitable for cutting grass in the garden, along border edges and around trees or fence posts. When the metal cutting blade is used, the equipment cuts grass, weeds or light plant growth. The equipment is intended exclusively for private use.

Any other use not explicitly authorized in these instructions may result in damage to the equipment and represent a serious hazard to the user. The equipment is not designed for cutting bushes, small trees or similar plants. The equipment is intended for use by adults. Young people over the age of 16 may usethe equipment only under supervision. The operator or user is responsible for accidents or damage to other people or their property. The manufacturer is not liable for damages caused by use other than for the intended purpose or by incorrect operation.

SAFETY INFORMATION

In order to be able to operate the equipment safely, all instructions and information in the operating instructions about safety, assembly and operation must be followed precisely. Anyone operating or maintaining this equipment must be familiar with the operating instructions and informed of potential hazards.

Do not allow access by children or by people who are ill or infirm. Children must be carefully supervised when they are in the area of machinery. Observe the regional and local accident prevention regulations applicable where you are. The same applies for all regulations concerning occupational safety and health in the workplace. The manufacturer cannot be held liable if the machines produced by the same are modified without permission and if damage to people or property occurs as a result of such modifications.

⚠ Warning!

Always take basic precautions when using machinery. Please also observe all tips and information in the additional safety information.

General Safety Information

1. Observe the surrounding conditions under which you are working. The motorized equipment produces toxic fumes as soon as the engine is running. These gases may be odourless and invisible. Therefore, never work with the equipment in enclosed or poorly ventilated spaces. Ensure adequate ventilation when working. Ensure a safe stance in the wet, snow and ice, on slopes and on uneven territory.
2. Do not allow strangers to use the equipment. Visitors and onlookers –particularly children and people who are ill or infirm – must be kept away from the workplace. Prevent other people from coming into contact with the tools. Do not pass on the equipment to people who are unfamiliar with the equipment and its handling.
3. Ensure the safe transport and storage of the equipment. Always carry the equipment suspended by the carrying strap on the tube. Equipment that is not in use must be stored in a dry place as high up as possible or locked away to be inaccessible.
4. Always use the right tool for any work. E.g. do not use small tools or accessories for work that should actually be performed with heavy tools. Use tools only for the purposes for which they have been constructed.
5. Ensure appropriate clothing. Clothing must be appropriate and not impede you when working. Wear clothing with cut protection pads.
6. Use personal protective equipment. Wear safety boots with steel caps / steel soles and non-slip soles. Wear a hard hat if there is a risk of falling objects when working.
7. Wear safety goggles. Objects may be thrown out. Serious eye injuries may result.
8. Wear ear protection. Wear personal sound protection, e.g. earplugs.
9. Hand protection. Wear strong gloves – leather gloves offer good protection.
10. Operating the equipment. Never work without the protection on the cutting tool. Risk of injury from objects being thrown out.
11. Remove the socket wrench etc. All keys or similar must be removed before the equipment is switched on.
12. Stay alert at all times. Pay attention to what you are doing. Use your common sense. Do not use motorized tools when you are tired. Work with the equipment must not be carried out under the influence of alcohol, drugs or medications, which impair reactions.
13. Filling with fuel.
    - Always adhere to the current fire regulations and the respective state/federal regulations for fire prevention.
    - Fuel and fuel fumes are highly flammable.
      Do not fill with fuel when the engine is running or still hot. When filling up, ensure good ventilation. Smoking and open flames are prohibited.

- Always switch off the engine before filling. Always open the filler cap with care, so any excess pressure present can be relieved slowly and no fuel sprays out. The work with the equipment causes high temperatures on the housing. The equipment must therefore be allowed to cool before filling. Otherwise, the fuel could ignite and cause serious injuries.
- When filling with fuel, ensure that the tank is not overfilled. If liquid misses, this must be cleared away immediately and the equipment cleaned.
- After filling, ensure that the seal screw is sitting properly in order to prevent it from coming loose as a result of the vibrations caused during the work.
- Watch out for leaks. Do not start the engine if fuel is leaking. Risk of death as a result of burns!

14. Usage duration and breaks. Prolonged use of the motorised equipment can cause circulation disorders in the hands as a result of the vibration. However, the usage duration can be extended with suitable gloves or regular breaks. Be aware that personal tendency to poor circulation, low external temperatures and high gripping forces will reduce the usage duration when working.
15. Be aware of damaged parts. Before initial operation and after severe impacts, check the equipment for signs of damage and wear. Are individual parts damaged? In case of slight damage ask seriously whether the tool will nonetheless work properly and safely. Ensure correct alignment and adjustment of moving parts. Do the parts interlock correctly? Are parts damaged? Is everything correctly installed? Are all the other requirements in place for proper functioning? Damaged safety devices etc must be repaired or replaced by authorised people if there is no explanation otherwise in the operating instructions. Defective switches must be replaced by an authorized body. If repairs are required, please contact a customer service centre authorized by us.
16. Always switch off the engine before undertaking adjustments or maintenance work. This particularly applies for work on the cutting head.
17. Use only authorised parts. In case of maintenance and repair, use only identical spare parts. Contact the service centre for spare parts.

⚠ Warning!

The use of other nylon heads as well as accessories and attachments that are not explicitly recommended can result in danger to people and objects. The tool is to be used only for the intended purpose. Any misappropriation is regarded as improper use. The user alone – and definitely not the manufacturer – is responsible for property and personal damage resulting from such improper use.
The manufacturer cannot be held liable if machines from the same are modified or used improperly and damage occurs as a result.

Caution! A certain residual risk, which cannot be eliminated, always remains even in the case of proper use of the tool. The following potential hazards can be derived from the type and design of the tool:

- Contact with the unprotected cutting head (cuts).
- Reaching into the scythe when it is running (cuts).
- Hearing damage if no appropriate protection is worn.
- Dust and gas formation that is harmful to health if the equipment is used in enclosed spaces (nausea).

Additional Safety Regulations

1. Caution! Always keep hands and feet away from the cutting area, particularly when starting the equipment.
2. Always hold the equipment with both hands on the multifunction handle. Always keep the equipment at an appropriately safe distance from the body and assume a stable body position. Always use the carrying strap.
3. Always wear safety goggles.
4. Use the equipment only in daylight or with the option of good artificial lighting.
5. Do not use the equipment in the rain or on damp grass.
6. Before use or after an impact, check the equipment for possible damage; repair if necessary.
7. Do not use the equipment if the safety devices are damaged or not correctly installed.
8. Ensure that the engine ventilation slots, protective cover and cutting device are always free of dirt or residues.
9. During the work processes, always ensure that there are neither people nor animals within a radius of at least 15 m. Switch off the equipment immediately if anyone and particularly a child comes into the range of the machine. When using the equipment, stones and other elements that can cause serious injuries can be thrown out.
10. When the equipment is in operation, keep away from the moving parts (in the area of the cutting devices). After switching off, the cutting head continues to turn for a few seconds.
11. Before using the equipment, remove stones, twigs and any other solid material from the working area. Start the machine only as described in the instructions. It must not be turned upside down or be in the working position when it is started. Do not cross gravel roads or paths with the equipment running.

12. The greatest care is required when extending the cutting thread. Risk of injury from cuts. After executing these processes, reassume the correct working position before switching on the equipment.
13. Do not use metallic cutting reels or saw blades. Note that the equipment remains in operation for a few seconds after the switch is released.
14. Switch off the engine when:
    - Refuelling the equipment,
    - Not using it,
    - Leaving it unattended,
    - Cleaning it,
    - Transporting it from one location to another,
    - Removing or replacing the cutting device and manually adjusting the length of the cutting thread.

Precautions to Prevent Recoil

In case of recoil, the user receives a powerful jolt from the motorized strimmer. This may result in loss of control of the equipment and in serious injury. Recoil can be avoided by care and correct technique.

When the metal cutting blade is used, there is a risk of recoil if the blade edge hits an obstacle (stone, wood).

- Hold the equipment firmly in both hands.
- Ensure that there are no obstacles on the ground and do not use the metal cutting disk near fences, metal posts or similar.

SYMBOLS

Symbols in the Instructions

Warning signs with details for the prevention of personal and property damage.

Command signs with details for the prevention of damage.

Information signs with information for better handling of the equipment.

Symbols on the Equipment

On the equipment, there are information symbols. These convey important information about the product or information about its use.

- Caution: Special safety measures are required when handing the equipment!
- The entire operating instructions must be read and understood before use. Nonobservance of the operating instructions may be fatal!

1. Read the operating instructions carefully before using the equipment.

2. Wear eye, ear and head protection.

3. Wear protective gloves. Risk of injury from cuts.

4. Wear safety boots with sturdy soles.

5. Maintain a safety distance of min. 15 m from others.

6. Danger from parts being thrown out! Keep away from other people.

7. Caution! Fuel and fuel fumes are flammable. Risk of fire and explosion!

8. Caution! Hot surfaces – risk of burns!

9. Symbol on the fuel pump: Press the fuel pump 10x before starting

10. Specification of the guaranteed sound power level LWA in dB.

11. Maximum rotational frequency of the spindle.

12. Conforms to current standards.

13. Mix ratio 50:1, Use ONLY fuel mix

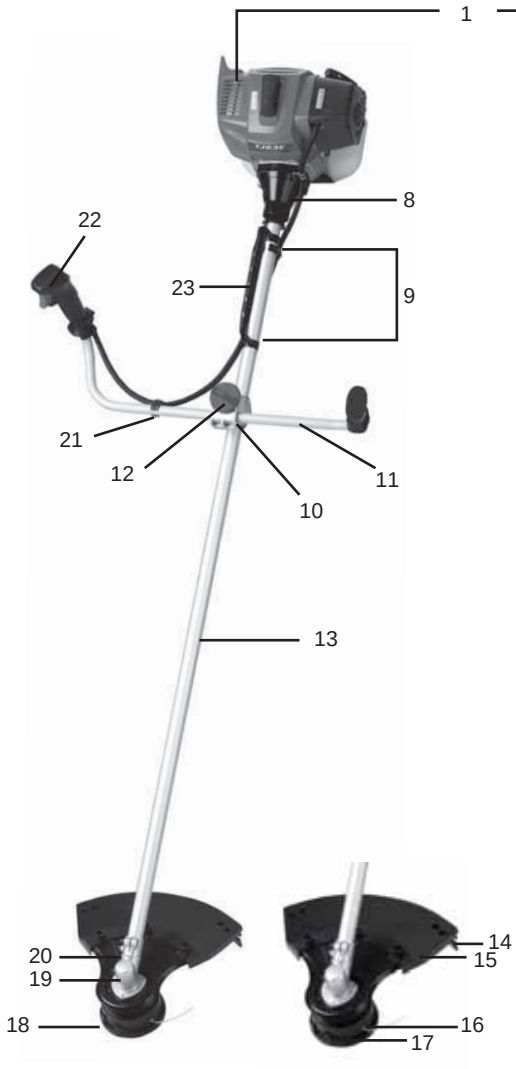
14. Symbol on the choke lever
Lever in cold start position (START)

Lever in warm start position (RUN)

15. Gasoline is extremely flammable and explosive.
Stop engine before refueling.

16. Exhaust gas contains carbon monoxide, an odorless and deadly poison.
Do not Engine in an enclosed area.

GENERAL DESCRIPTION



pic 1

1 Engine housing
2 Fuel tank
3 Starter handle with starter cable
4 Choke lever
5 Air filter cover
6 Ignition cable
7 Muffler
8 Accelerator cable
9 Large cable clamps
10 Anti-vibration ring
11 Bike Handle
12 Handle Adjustment Knob
13 Shaft tube
14 Line cutter
15 Nylon Head Guard
16 Nylon Head
17 Cutting Line Spool
18 Metal cutting blade
19 Gear Housing
20 Metal Blade Guard
21 Small cable clamps
22 Multi-function Control Handle
23 Carry Ring for Shoulder Strap

Safety Functions

• On/off switch (picture 2, no. 40)

The on/off switch switches off the engine. It must be in position in order to restart the engine.

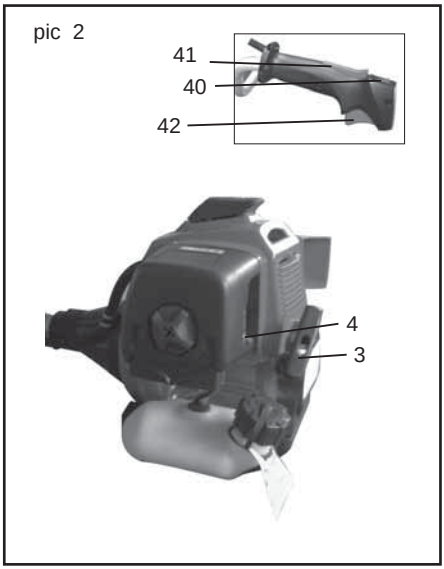
• Throttle lock (picture 2, no. 41)

Prevents accidental acceleration of the engine. The throttle can be operated only when the throttle lock is depressed.

• Nylon Head Guard

(Picture 1, nos. 15 + 20)

Protects the operator from accidental contact with the cutting tool and foreign bodies being thrown out.



Functional Description

The manually operated and portable motorized strimmer is driven by a combustion engine, which operates without interruption during the work.

The power transmission is by means of a clutch disc, which transmits the output to the cutter via a centrifugal clutch at high speed.

The equipment has an automatic double thread reel as the cutter as well as a metal cutting blade, which can be fitted optionally.
In the cutting process, two nylon lines or four metal blades rotate about an axis vertical to the cutting level. To protect the user, the equipment has a protective device, which covers the cutting device.
Please refer to the descriptions below for how the operating parts work.

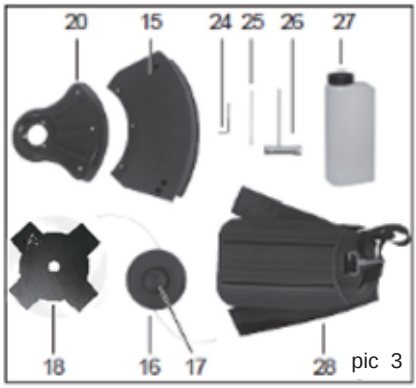
Delivery Contents (Picture 3)

Start by unpacking the equipment and check that it is complete.

- Engine part with shaft tube, cutting head holder, accelerator cable and unfitted multifunction handle (see picture 1)

15 Nylon Head Guard (including fixings)
16+17 Nylon Head & Cutting Line Spool
18 Metal cutting blade (4 teeth)
20 Metal Blade Guard (including fixings)
24 Allen key
25 Maintenance Locking Pin
26 Maintenance Socket Spanner
27 Fuel mixing can
28 Shoulder Strap

- Instruction Manual



pic 3

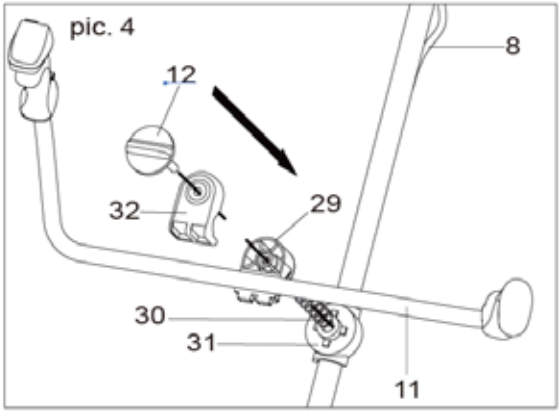
ASSEMBLY

Before operation of the equipment the equipment must be fully assembled correctly, including attachment of the shoulder strap.
Check equipment and assembly is correct prior to operation.

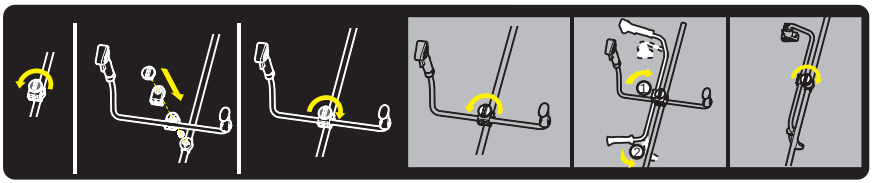
Fitting the Handle (Picture 4)

1. Turn counterclockwise to loosen handle adjustment knob (12) and take off top handle holder (32).
2. Place Bike Handle (11) in the handle slot, close bottom handle holder (29) with top handle holder (32).
3. Insert handle adjustment knob (12) through handle holder (32, 29), spring (30) and handle base (31), turn clockwise and fix them firmly.
3. Fix the accelerator cable (8):
   With the large cable clamp (9) on the shaft tube (13);
   With the small cable clamp (21) on the bike handle (11).

Ensure that the accelerator cable (8) is not twisted or kinked.



Foldable function of bike handle for easy transportation:
1. Turn counterclockwise several times to loosen tube fixing knob (12);
2. Turn clockwise and fold bike handle (11) to save space.



Installing/Removing the Metal Cutting Blade

Wear protective gloves when handling the metal cutting blade.

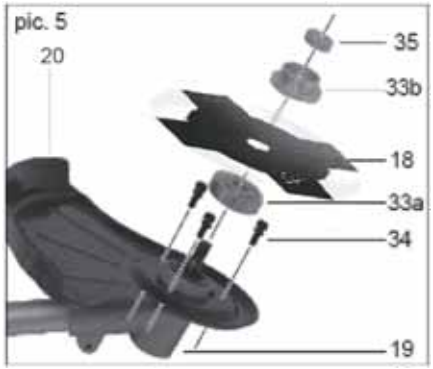
Dismantling the Nylon Head is described in the section on « Installing/Removing the Nylon Head ».

Installing the Metal Blade Guard (picture 5):

1. If applicable, unscrew the top (33b) and bottom (33a) flanges mounted on gear housing (19).
2. Screw the guard (20) onto the gear housing (19) using the 3 screws (34) enclosed.

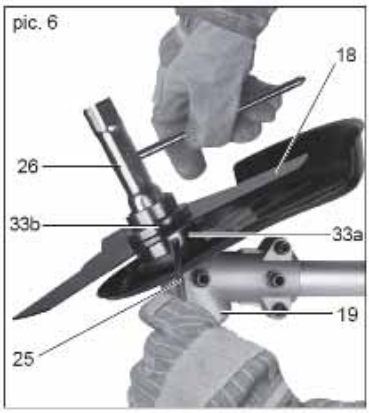
Installing the metal cutting blade (picture 5):

3. Place the metal cutting blade (18) and flanges (33a+b) on the Gear Housing (19) in the following order: Bottom flange (33a) – metal cutting blade (18) – top flange (33b).
4. Screw on the metal cutting blade (18) anticlockwise using the fixing nut (35) and with the aid of the Maintenance Socket Spanner (see picture 2, no. 26).



Removing the metal cutting blade (picture 6):

5. To lock the axle, push maintenance locking pin (25) sideways into the hole provided on the gear housing (19) and on the bottom flange (33a).
6. Unscrew the fixing nut clockwise with the aid of the Maintenance Socket Spanner (26) and remove the top flange (33b) and the metal cutting blade (18).



Check that the pin is removed from the hole on the gear housing before starting the engine.

Installing/Removing the Nylon Head (Picture 7):

Dismantling the metal cutting blade is described in the section on "Installing/Removing the Metal Cutting Blade".

Installing the Guard:

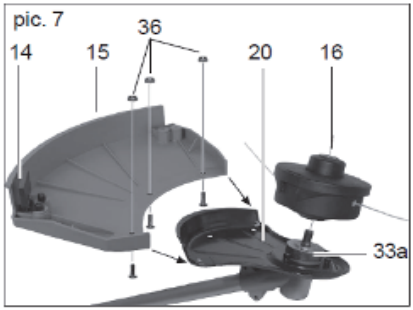
1. Screw the Guard (15) onto the Metal Blade Guard (20) using the 3 screws and nuts (36) enclosed.

Installing the Nylon Head :

2. Screw the Nylon Head (16) anticlockwise onto the cutting head holder by hand, as indicated in the diagram.
3. Remove the protective cap on the Line cutter (14).

Removing the Nylon Head:

4. Unscrew the Nylon Head (16) clockwise by hand. To make the work easier, the cutting head holder (19) and bottom flange (33a) can be locked using maintenance locking pin (25) (see also picture 6).
5. Removing the Guard (15) and replace the protective cap over the line cutter (14).



Filling with Fuel (Picture 8):

Always ensure good ventilation when handling fuel.
Do not smoke when filling with fuel and keep away from any heat sources. Never fill with fuel when the engine is running. Open the tank cap carefully, so any excess pressure present can be relieved slowly. Start the equipment min. 3 m away from the fuel filling location. Risk of fire or explosion in case of non-observance.

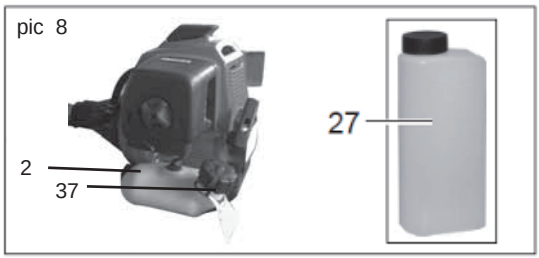
Use only the fuel mix recommended in the instructions. The fuel mix deteriorates over time. Therefore, do not use fuel mix that is older than 3 months. In case of non-observance, the engine can be damaged and the guarantee will be invalidated.

Avoid direct skin contact with petrol and the inhalation of petrol fumes. Health hazard!

The equipment is fitted with a two-stroke engine and therefore operated exclusively with a mix of petrol and two-stroke engine oil in the ratio 50:1.

- Use quality unleaded petrol with an octane rating of at least 91.
- Optimum performance will be achieved with the use of high quality two-stroke engine oil (FC class) designed specifically for the equipment. If this is not available, use super oil for air-cooled two-stroke engines.

1. Mix petrol and oil in the fuel mixing can (27) included in the delivery: Fill with petrol (gas) up to the “588.36” mark. Fill with two-stroke engine oil (oil) up to the “1:50” mark. Close the container and shake carefully.
2. Unscrew the tank cap (37) and pour the fuel mix into the fuel tank (2). Wipe away fuel residues around the tank cap and reclose the tank cap.



Initial Operation

⚠ Warning!

Before initial operation of the equipment, it must be checked that the condition is safe for operation. If there is any doubt, do not start the equipment.

Observe the following points in particular:

- Check the cutting tools for damage and wear.
- Correct installation of the cutting head
- Easy movement of all switches
- Secure sit of the spark plug connector. If the connector is loose, sparks can be formed and thus ignite any leaking fuel
- Ensure the handles are clean in order to be able to guide the equipment safely.
- All safety and protective devices must be properly installed and in place before the equipment can be started.

The nylon head must be able to run freely.

Before starting the equipment, ensure that the nylon head is sitting correctly and that the moving parts are free.

⚠ Warning!

If there is any doubt, seek help with the operation of this equipment from a specialist in an authorised service centre.

Putting on the Shoulder Strap (Picture 9):

Always wear a shoulder strap when working with the equipment. Always switch off the equipment before loosening the shoulder strap. Risk of accidents.

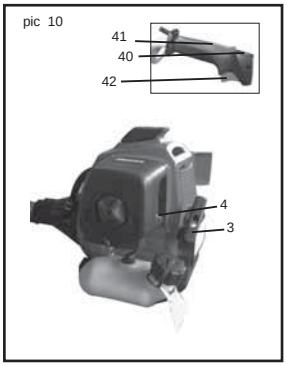
1. Put on the shoulder strap (28) and close the strap clasp (38).
2. Adjust the strap so it fits tightly.
3. Adjust the strap so the spring clip (39) is around 10 cm below the hip.
4. Fix the spring clip onto the carry ring for shoulder strap (23) on the equipment.

Unhook the equipment before starting the engine and fix it to the carrying strap with the engine running.

Starting the Engine (Picture 10):

Start the engine at least three metres from the filling location

Ensure that the protective cap on the line cutter (see picture 7, no. 14) has been removed.



1. Fuel

• Level the engine before fueling.

• Open the fuel tank cap and fill the fuel tank with 50:1 gas/oil-mixed fuel.

• Pour slowly to avoid splash back" and allow air to escape from the fuel tank.

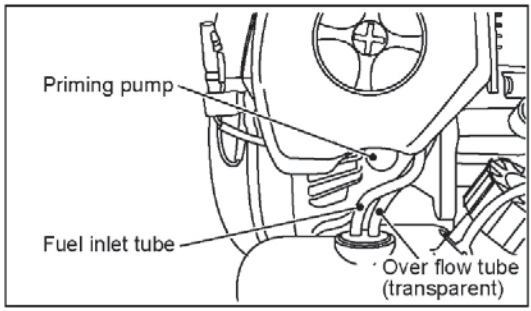
• Close the tank cap securely by turning it clockwise as far as it will do.

⚠ Warning!

Never fill the tank so the fuel level rises into the filler neck. If the tank is overfilled, heat may cause the fuel to expand and overflow through the vents in the tank cap. After refueling, make sure the fuel tank cap is closed securely. If gasoline is spilled on the fuel tank, wipe it off immediately.

Danger! Exhaust gases contain carbon monoxide, a colorless, odorless, poisonous gas. Do not operate the engine in enclosed areas. Provide adequate ventilation at all time.

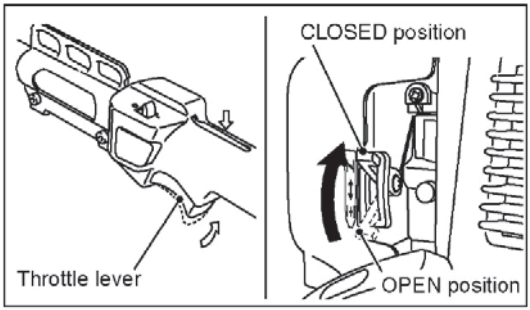
2. Set the on/off switch (40) on the switching element (22).
3. Move the throttle lever on the equipment to the fully CLOSED (engine idle speed) position.
4. Slowly push the priming pump (see picture 1, no. 7) several times until the fuel comes out of the overflow tube.



Note:

- This engine is designed so that overflowed fuel due to pushing a priming pump is to be returned to the fuel tank.
- There is no fear of flooding the engine, so push the priming pump enough times to get the engine started.

5. Choke lever type:



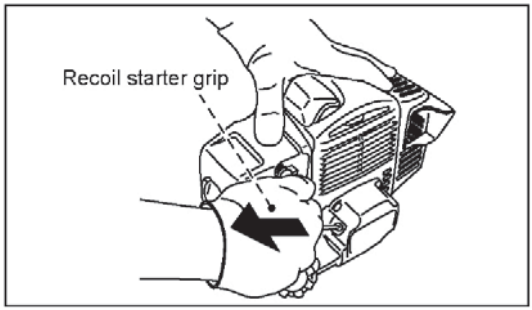
Move the choke lever to the “CLOSED” position.

Move the throttle lever to the half position.

Note:

- When the engine is already warm up, no lift up lever or choke lever required.

6. Hold the equipment firmly with one hand on the shaft tube (13). With the other hand, pull the starter cable several times on the starter handle (3) until the engine starts. Pull the recoil starter grip slowly to engage the starter, then give a short, quick pull.

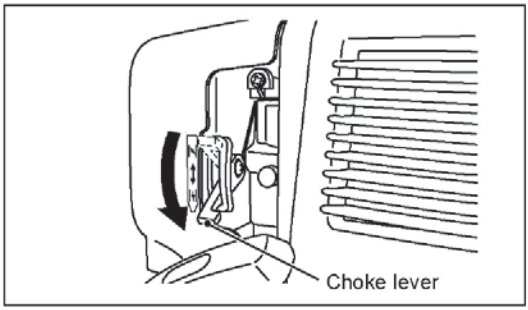


Caution! Do not pull the starter cable out too far – risk of breaking!

⚠ Warning!

Releasing the starting rope suddenly may allow the rope to whip around and cause injury and/or damage the recoil starting mechanism. When starting the engine, firmly grasp the recoil starter grip; do not grasp the starter rope itself. Always control the rope as it rewinds into the housing.

7 Lift up lever type



- After starting, move the choke lever to the “OPEN” position gradually.
- If the engine fires only briefly and stops, move the choke lever to the “OPEN” position.
- Repeat the recoil start until the engine start.

After starting, run the engine at the idling speed for a few minutes. (see “Warming up”)

Note

• Should the engine fail to start, do not try the recoil start many times with the choke lever to the "CLOSED" position. This will cause the fuel to flood into the cylinder and make starting even more difficult. In this case, set the choke lever to the "OPEN" position. And then, repeat the starting.

• After starting, vary the engine speed a few times, by operating the throttle lever to draw out the remaining air in the carburetor.

8. Warming up

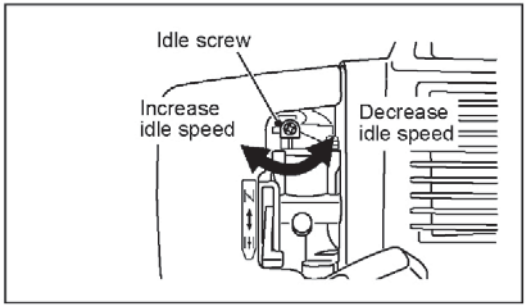
After starting the engine, run the engine at the idling speed (throttle lever position is fully CLOSED) for a few minutes.

Notice:

Allow sufficient warm-up time to prevent engine damage and run the engine smoothly. The engine should be run at idle speed for a few minutes to allow it to warm up before applying a load. This will allow oil to reach engine parts, and allow piston clearance to reach design specifications.

9. Adjusting

Choke lever type



Idling speed

• If the cutting blade move when the engine is running at the idle speed, turn idle screw counterclockwise to decrease the engine idle speed.

• If the engine does not run the idle speed, it may be changed too low, turn idle screw clockwise to increase the engine idle speed. The stable idle speed for TJ53E is 3000r/min.

Fuel adjustment

The carburetor has been adjusted to the optimum fuel supply at the factory. Don't reset the carburetor setting.

Note:
If adjustment is needed, if should be performed by your authorized Kawasaki dealer.

10. Attach the equipment to the shoulder strap that has been put on (see chapter on “Putting on the Shoulder Strap”).
11. To mow, hold the throttle lock (41) depressed and operate the throttle (42).
12. STOPPING

- Move the throttle lever on the equipment to the fully CLOSED(engine idle speed) position, and the engine running at idle speed.
- Turn the engine switch to the “O” (stopping) (40) position.

Notice:
Suddenly stopping engine from high speed operation can cause engine damage. Reduce engine speed to idle speed to idle speed for one minute before shutting engine off after high-speed, full-load operation.

Emergency stop

Turn the engine switch to the “o” (stopping) (40) position.

Working Notes

- When cutting, observe the countryspecific / local regulations.
- Do not cut during commonly applicable quiet periods.
- Solid objects such as stones, metal pieces or similar must be removed. These can be thrown out and therefore result in personal or property damage.
- When cutting in high bushes or hedges, the working height should be at least 15 cm. This prevents the risk to animals, e.g. hedgehogs.

Work safely and considerately!

- Always hold the equipment firmly and securely with both hands (see picture 8).
- Cut only grass and weeds. Be aware of roots or tree stumps – risk of tripping.
- Work considerately and endanger nobody when cutting. Work quietly and carefully.
- Work only in adequate visibility and lighting conditions.
- Keep an eye on the cutting head.
- Never cut above shoulder height.
- Never replace the plastic cord with a steel wire – risk of injury and damage.

• Do not work on a ladder.
• Work only on firm and stable bases.
• Always carry the equipment suspended by the shoulder strap or on the tube.

Working with the nylon head

• On small grass areas, hold the equipment at an angle of approx. 30° and turn evenly to the right and left with a semi-circular movement.
• The best results are obtained with maximum grass length of 15 cm. If the grass is longer, nylon several times is recommended.
• To cut around trees, fence posts or other obstacles, go slowly around the obstacle with the equipment and cut with the tips of the cutting line.
• Avoid contact with solid obstacles (stones, walls, board fences etc) otherwise the line will quickly wear out. Use the edge of the nylon head guard to keep the equipment at the correct distance.

Caution! Do not place the cutting head on the ground during operation!

Extending the cutting line

The equipment comes with a double line tap feed mechanism, i.e. both lines extend if the mowing head is tapped on the ground.

1. Hold the equipment in operation over a grassy area and lightly tap the mowing head a few times on the ground. This extends the line.
2. The line cutter included in the nylon head guard cuts the line to the desired length.

If the line ends no longer extend:

• Switch off the equipment.
• Press the reel insert until it stops and give a strong pull on the thread end.If no thread ends are visible:

If no thread ends are visible:

• Inspect and if necessary replace the line or cutting line spool (17) (see chapter on Changing the spool).

Caution! Line remnants may be thrown out and cause injuries.

Working with the Metal Cutting Blade

When working, always wear the shoulder strap and appropriate protective clothing. Wear eye, ear and head protection. Ensure that the cutting blade is installed properly. Replace damaged or blunt tools. Risk of injury.

Use the cutting blade only to work on open, level areas. Inspect carefully the area to be cut and remove all foreign bodies. Avoid impacts on stones, metal or other obstacles. The metal cutting blade could be damaged and there is a risk of recoil.

- When working, hold the cutting head over the ground and swing the equipment slowly to and fro in an even curve, like a line trimmer.
- Do not hold the cutting blade at an angle.
- Do not use the equipment to cut uncontrolled growth, undergrowth or scrub.
- Check the metal cutting blade regularly for damage and replace damaged cutting blades.

If the Equipment Vibrates

Clean the equipment, remove any grass remnants present on the cutting head and in the protective cover.

MAINTENANCE AND SERVICE

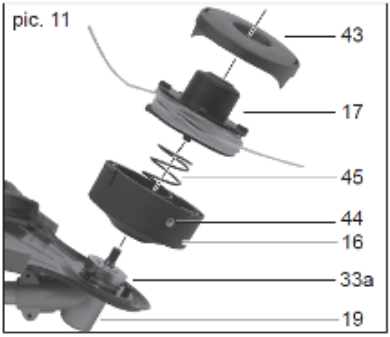
Have any work not described in these instructions carried out by service centre. Wear gloves when handling the metal cutting blade and thread cutter. Risk of injury. Never use metallic lines or saw blades. The use of such nonoriginal parts can cause personal injury and irreparable damage to the equipment and will result in immediate invalidation of the guarantee.

Cleaning the Equipment

- Clean the cutting device and protective cover of grass and earth after each cutting procedure.
- The equipment is to be neither sprayed with water nor placed in water.
- Do not use detergents or solvents. These could cause irreparable damage to the equipment

Changing the spool (Picture 11)

1. Switch off the engine.
2. Place the equipment on the ground and ensure that no fuel leaks and that the equipment is safely supported.
3. Unscrew the nylon head (16) clockwise by hand. To make the work easier, the gear housing (19) and bottom flange (33a) can be locked using maintenance locking pin (see also picture 6).
4. Pull off the spool cover (43) and remove the cutting line spool (17) from the nylon head (16).
5. To install the new spool, thread both line ends through the eyes (44) in the nylon head. Press the spool into the nylon head. Ensure that the springs (45) are sitting correctly here.
6. Replace the spool cover (43) and press it into the slots in the nylon head (16); it clicks in audibly.



7. Screw the nylon head (16) anticlockwise onto the drive shaft.
8. Trim the lines to approx. 13 cm in order to strain the engine less in the start and warm-up phase.

Sharpening the line Cutter

Wear protective gloves to avoid cutting injuries.

1. Unscrew the line cutter (14) from the nylon head guard (15) (see picture 1).
2. Fix the line cutter in a vice and sharpen the blade with a flat file. File carefully and only ever in one direction.

Do not use the equipment without a line cutter or with a defective line cutter. If the line cutter blade is damaged, contact our service centre.

Engine maintenance:

⚠ WARNING
Prevent accidental starting during engine service by removing the spark plug caps.

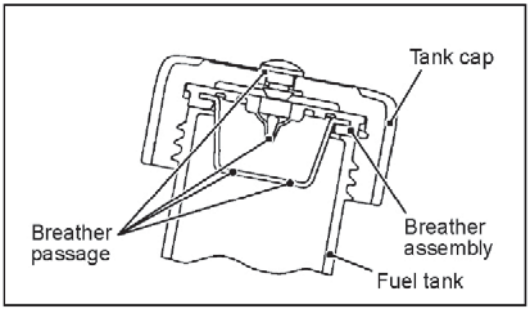
Periodic Maintenance Chart

	Maintenance	Interval				
		Daily	First 20 hours	Every 20 hours	Every 50 hours	Every 100 hours
	Check and replenish fuel	●				
	Check for fuel leakage	●				
	Check bolts, nuts and screws for looseness and loss	●				
	Clean fuel filter			●		
★	Clean air cleaner element			●		
	Tighten bolts, nuts and screws		●		●	
	Clean spark plug and adjust electrode gap				●	
★	Remove dust and dirt from cylinder fins				●	
K	Remove carbon deposits on piston head and inside cylinder				●	
K	Remove carbon deposits in the exhaust pipe of muffler				●	
	Clean screen of spark arrester				●	
K	Check the sliding portion of crankshaft, connecting rod etc.					●
	Fuel tube	It is recommended to replace every 3 years.				

Note : The service intervals indicated are to be used as a guide. Service to be performed more frequently as necessary by operating condition.
When damage or defect occurs in checked parts, replace with a new one.
K : Service to be performed by an authorized Kawasaki dealer.
★ : Service more frequently under dusty conditions.

Fuel Tank Cap Service

A breather passage is incorporated in the tank cap. If the breather passage is clogged, the fuel will not flow into the carburetor, causing problems with starting or running the engine. At the same time, make sure that the base of the breather assembly is fitted firmly into the groove inside the tank cap as shown.

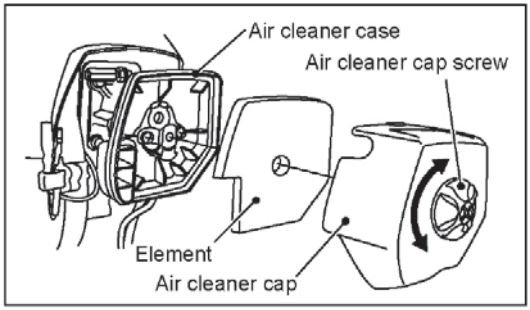


Air Filter service

Keep the air filter clean. Clean the air cleaner element every 20 hours.

1. Switch off the engine.
2. Remove the air cleaner cap from the air cleaner by removing the air cleaner cap screw.
3. Remove the element from the air cleaner case.
4. Wash the element in detergent and water, and dry it thoroughly.
5. Reinstall the element in the air cleaner case and reinstall the air cleaner, and tighten the screw.

Improper element cleaning can result in engine damage. Do not use compressed air to clean or dry element. Always clean element with an approved high flash point solvent only. Never use gasoline. Do not operate engine with air filter parts removed.

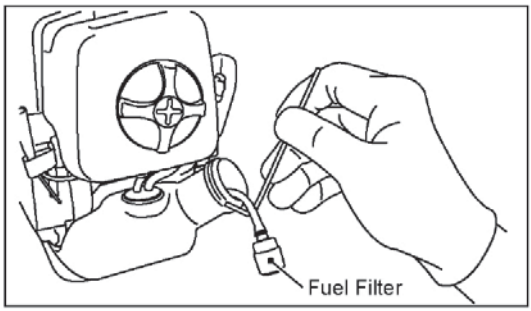


Fuel Filter service

Never operate the equipment without a fuel filter. Change the fuel filter regularly.

Every 20 hours of operation

1. Pull the fuel filler out from the fuel tank.
2. Clean the fuel filter in a bath of high flash point solvent.
3. Dry the fuel filter and reinstall it into the fuel tank.



Note:

If a fuel still does not flow well after the cleaning, replace the fuel filter with new one.

Warning! Many solvents are highly flammable and may cause serious burns. Improper use of solvents can result in fire or an explosion. Do not use gasoline or low flash point solvents to clean the fuel filter. Clean only in a well-ventilated area away from sources of sparks or flame, including any appliances with a pilot light.

Spark Plug service

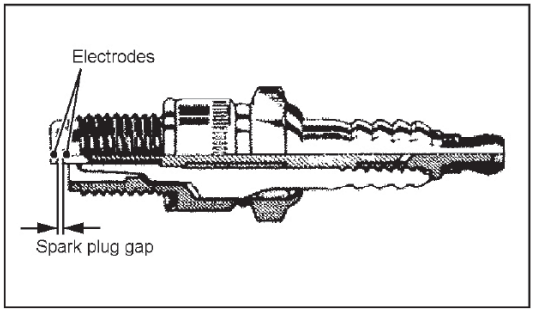
Worn spark plugs or a spark gap that is too great will result in a power reduction of the engine.

Every 50 hours of operation

1. Switch off the equipment.
2. Take the spark plug cap with fingers, and pull it up.
3. Remove the spark cap by using a suitable plug wrench.
4. Clean the electrodes by scraping or with a wire brush to remove carbon deposits and wetness.
5. Inspect for cracked porcelain or other wear and damage. Replace the spark with a new one if necessary.

6. Check the spark plug cap and reset it if necessary. The cap must be between 0.6mm and 0.7mm. To change the gap, bend only side-electrode, using a spark plug tool.
7. Install and tighten the spark plug to 14N.m(1.4kgf.m)
8. Fit the spark plug cap on the spark plug securely.
9. Pull up the spark plug cap lightly to make sure of the installation of the spark plug cap.

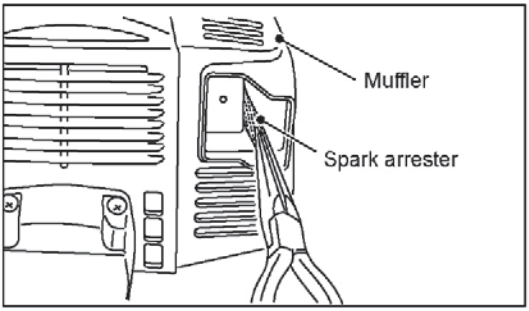
Recommended spark plug for TJ53E: NGK BPMR8Y.



Spark arrester service

Every 50 hours of operation

1. Remove the spark arrester from the exhaust hole of muffler.
2. Clean deposits from the spark arrester screen by brushing it.
3. Install the spark arrester.



Carbon Removal of engine internal parts

Every 50 hours of operation

These items must be performed with proper tools. See your authorized Kawasaki dealer for service.

If the engine malfunctions, carefully examine the symptoms and the operating conditions, and use the table below as a guide to troubleshooting.

Symptom		Probable Cause	Remedy
Engine won't start or output is low	Insufficient compression	Faulty piston, cylinder and piston ring	K
		Loose spark plug	Tighten properly
		Loose cylinder bolts	
	No fuel to combustion chamber	No fuel in fuel tank	Fill fuel tank
		Blocked fuel filter or tube	Clean
		Blocked air vent in tank cap	
		Faulty carburetor	K
	Spark plug fouled by fuel	Over-rich fuel/air mixture	Turn lift up lever to "RUNNING" position. Move the choke lever to "OPEN" position. Pull recoil starter grip with spark plug removed to discharge excess fuel. Clean spark plug.
		Clogged air cleaner	Clean
		Faulty carburetor	K
		Incorrect grade / type of fuel	Change fuel
		Water in fuel	
	No spark or weak spark	Faulty spark plug	Replace spark plug
		Faulty ignition coil	K
		Engine switch left in "O" (stopping) position	Turn engine switch to "I" (starting) position
Low output	Engine overheats	Clogged air cleaner	Clean
		Recoil starter or cooling air path clogged with dirt	
		Carbon built-up in combustion chamber	K
		Poor ventilation around engine	Select a better location

K: Service should be performed by an authorized Kawasaki dealer.

STORAGE

General Storage Instructions

- Clean the equipment and accessories carefully before storage.
- Keep the equipment in a dry and dustproof place out of reach of children.
- Do not wrap the equipment in plastic bags, as damp and mould may form.
- Do not store the equipment on the protective cover; ideally hang it from the top handle.

Storage During Working Breaks

Non-observance of the storage instructions can cause starting problems or permanent damage as a result of fuel residues in the carburettor.

1. Drain the fuel tank in a well-ventilated place.
2. Start the engine and allow it to tick over until the engine stops and the carburettor is free of fuel.
3. Allow the engine to cool (approx. 5 minutes).

In case of working breaks of more than 3 months:

Engine to be stored over 30days should be completely drained of fuel to prevent gum deposits forming on essential carburetor parts fuel filter and fuel tank.

1. Clean the engine.
2. Remove all the fuel from the tank and run the engine at idling to use up the fuel in the carburetor.
3. Remove the spark plug, pore in 0.5mL of new 2-stoke engine oil through the plug hole, pull the recoil starter grip several times, and reinstall the spark plug.
4. Slowly pull the recoil starter grip until resistance is left.
5. Store the engine in a clean and dry place.

Warning! Gasoline is a toxic substance. Dispose of gasoline properly. Contact your local authorities for approved disposal methods.

DISPOSAL / ENVIRONMENTAL PROTECTION

Machinery does not belong in domestic waste.

Do not allow used oil and petrol residues into the sewer system or drains.
Dispose of used oil and petrol residues in an environmentally friendly way – take them to a disposal point.
Take the equipment, accessories and packaging for environmentally friendly recycling.

Drain the petrol tank carefully and take your equipment to a recycling point. The plastic and metal components used can be separated by type and therefore recycled.

GUARANTEE

- We guarantee this equipment for 24 months.
- The guarantee does not cover damage caused by natural wear, overloading or improper use. Certain components are subject to normal wear and not covered by the guarantee. These specifically include the: metal cutting blade, cutting line spool, cutting line, line cutter, air filter and spark plug.
- The guarantee is also conditional on adherence to the instructions on cleaning and maintenance.
- Please keep your receipt as proof of purchase.
- Please always contact the service center to verify all the specific conditions of guarantee of this product.

TECHNICAL SPECIFICATIONS

Engine……Kawasaki, TJ53E Forced air-cooled, 2 stoke
piston valve, gasoline engine.

Fuel Mix..... 50:1

Engine capacity..... 53.2 cm^3

Max. engine power..... 2.0 kW

Engine tick over speed..... 3000 rpm

Engine speed at recommended max. shaft speed..... 8500/min

Tank capacity..... 1100 cm^3

Weight (no cutting tool, Empty tank)..... 9.27 kg

Metal cutting blade Cutting radius..... 230 mm

Threads Cutting radius..... 460 mm

Thread thickness..... 2.5 mm

Thread length.....2 x 2.5 m

Sound pressure level (LpA)…… 102 dB (A)

Sound power level (LwA) Measure…… 110 dB (A), KpA=1.7 dB

Sound power level Guaranteed…… 113 dB (A)

Vibration (an).....7.0 m/s2, Kn=2.7 m/s2

Technical and visual changes may be made without notice in the course of development.
All dimensions, information and specifications in these operating instructions are therefore subject to change.
Legal claims made on the basis of the operating instructions can therefore not be enforced.

GARDIF
PARTENAIRE PAR NATURE

EC DECLARATION OF CONFORMITY

Serial number : pls see front page

We,company, **GARDIF**
60 AVE DE BRUXELLES
Z.A. DE L'EUROPE
77310 PONTHIERRY
FRANCE

The undersigner, Bruno VAN ELSLANDE, Managing Director,

Declare that the product PETROL BRUSH CUTTER:

LAWNKING models
LK FW53E - ref DBT911259 (MODEL FW53E)

Complies with the essential health and safety requirements of the following directives:

- The Machinery Directive 2006/42/EC
- The EMC Directive 2004/108/EC
- The Noise Directive 2000/14/EC & 2005/88/EC
- The Directive Emissions 97/68/EC&2002/88/EC&2004/26/EC

The conformity assessment followed was according to Directive 2000/14/EC, Annex V, and the Directive 2005/88/EC.

- Measured Sound Power Level: 110 dB(A)
- Guaranteed Sound Power Level: 113 dB(A)

Made in Ponthierry (France), 2013.12.11
B. VAN ELSLANDE, Managing Director